

## CANADA'S ICE-FIELD HIGHWAY

Defying description, this spectacular highway ranks among the great "highroads" of the world. Its entire length of 142 miles commands some of the most breath-taking and majestic scenery in the Canadian Rockies.

A panorama of mountain ranges, unbroken but ever-changing, flanks both sides of the highway sweeping from Lake Louise to Jasper townsite. At places the highway reaches a height of nearly 7,000 feet above sea-level. Several of the mountains in the region rise to more than 11,000 feet and are perpetually snow-capped.

The road passes within a mile of the Athabasca Glacier—a tongue of the great Columbia Ice-field. An access road takes you up beside the glacier for a snowmobile tour on the ice mass. At other points the motorist may stop and explore deep and awesome canyons, thrill to mighty waterfalls tumbling out of rocky chasms, or wonder at jewel-like mountain lakes that are ever in colour harmony with the mountain peaks and the skies above them.

Arrow signs along the road point to features of special interest, many of which are listed in this publication.

Wildlife, including many large animals, often may be seen along the roadside. Bungalow cabins, chalets, lodges, hikers' hostels and equipped campgrounds provide convenient accommodation along the route.

Further details can be obtained from information offices at Banff and Jasper townsites, Lake Louise station and at the Columbia Ice-field.

## THE COLUMBIA ICE-FIELD

The Columbia Ice-field, centre of the greatest known accumulation of ice in the Rocky Mountains, is not only one of the most interesting ice-fields in North America but also one of the most accessible. Near the highway it straddles the British Columbia-Alberta border and lies across the boundary of Banff and Jasper National Parks.

With its outlet glaciers, the Columbia Ice-field covers an area of nearly 150 square miles of which fully 50 square miles are more than 8,500 feet above sea level in the area of accumulation, usually called the *névé*. From this great ice reservoir, lying between Snow Dome, Mounts Castleward and Columbia and capping the Continental Divide for a distance of about 20 miles, three valleys radiate. Through them flow the Athabasca, the Saskatchewan and the Columbia Glaciers.

From other points smaller ice tongues flow into the surrounding valleys, and in a number of places ice tumbles over precipices to form such reconstructed glaciers as the Dome Glacier and the King Edward Glacier between Mounts Columbia and King Edward.

Melt waters of the Columbia Ice-field flow into three great rivers—the Athabasca (765 miles), a tributary of the Mackenzie River which flows into the Arctic Ocean; the Saskatchewan (1,205 miles) which crosses the prairies and empties into Lake Winnipeg and, via the Nelson River, into Hudson Bay; and the Columbia (1,210 miles) which cascades its way through scenic gorges, crossing into the United States before entering the Pacific.

## THE ATHABASCA GLACIER

Viewed from the highway or at close range by snowmobile, the massive Athabasca Glacier presents a magnificent sight. About six miles in length with a depth ranging from 600 feet to 1,000 feet, the huge ice tongue stretches to the northwest, guided by Andromeda and Athabasca Mountains and Snow Dome.

Well-defined and apparently recently-formed terminal and marginal moraines (see Glossary) indicate

that the Athabasca and nearby Dome Glaciers were joined at one time.

The present glaciers are remnants of the immense continental ice-cap which once covered a large part of the northern half of this continent.

Although in general glaciers are shrinking, it will be centuries before these mighty fortresses of ice give up their claim on the Rocky Mountains.

## Glacier Formation and Recession

Great depths of snow accumulate in mountain basins at high altitudes. The weight of this snow, assisted by surface melting, causes the lower layers to compact and form solid ice. Under the great pressure, together with gravitation, the glacier flows like a plastic body—though not more than a few inches a day—into the surrounding valleys.

When the slowly moving ice mass reaches lower altitudes melting occurs during the summer months forming glacial streams.

The shrinkage of glaciers is seen in the number of terminal moraines (see Glossary) visible in the valleys where glaciers descend. The nearest moraine to a tongue of ice is almost bare; the next moraine is some distance away from the ice tongue and perhaps has bushes growing on it; and others as far as a mile or two away might well be covered by forests.

Glacial recession has been caused basically by slight increases in annual mean temperatures, aided probably by lower rates of precipitation and longer periods of sunshine.

## Glossary

**Crevasses**—As a glacier flows over a rock bed or reaches a space of increased incline, tension is exerted in the upper portion of the ice until it ruptures. Such cracks or crevasses are enlarged from tiny openings by melting and changes of slope until they may become hundreds of feet in length and depth.

**Seracs**—As the glacier advances, these crevasses are bent out of shape and may be crossed by fresh crevasses, splitting up the ice into wild-looking lumps and pinnacles called seracs.

VF CANADA — 2011

**Ice-falls and transverse crevasses**—Passing over an uneven bed, the body of a glacier is first bent in one direction and then in the other. When the slope increases, great openings are formed across the glacier which are known as transverse crevasses, as they usually occur almost at right angles to the direction of the flow. The ice at this point may form in great steps with crevasses between them. This is known as an ice-fall.

**Glacier tables**—Medium-sized rocks, a few feet across, called glacier tables, are left standing on pedestals of ice, as they protect the glacier beneath from the sun, while thawing goes on around them.

**Marginal Moraines**—Debris torn from the mountainside and rocks even as large as cottages are carried along by a glacier. This fringe of broken rock on the edge of the glacier is a marginal moraine.

**Terminal Moraines**—When a whole mass of debris is carried steadily onwards to a point where melting is complete and no more can be borne, then a terminal moraine—a steep and rugged pile of loose rocks—is built up at the front of a glacier.

## FRONT PANEL:

*Like a satin ribbon, the Banff-Jasper Highway winds smoothly past lordly mountains dark with spruce.*

## BACK PANEL:

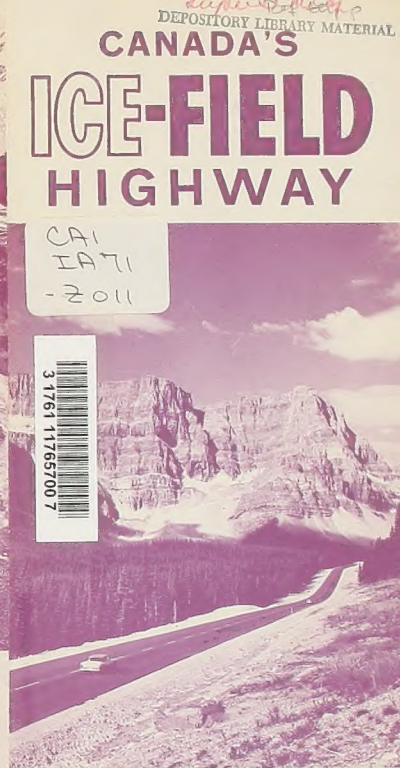
*Rumbling over age-old glaciers spilling out of mountain basins, peering into deep crevasses from a snowmobile, are experiences long to be remembered.*

Distributed by the  
**NATURAL AND HISTORIC  
RESOURCES BRANCH**

Published by authority of  
Minister of Northern Affairs and  
National Resources

Req. No. 386-41

Printed in Canada  
1966



in **BANFF** and **JASPER  
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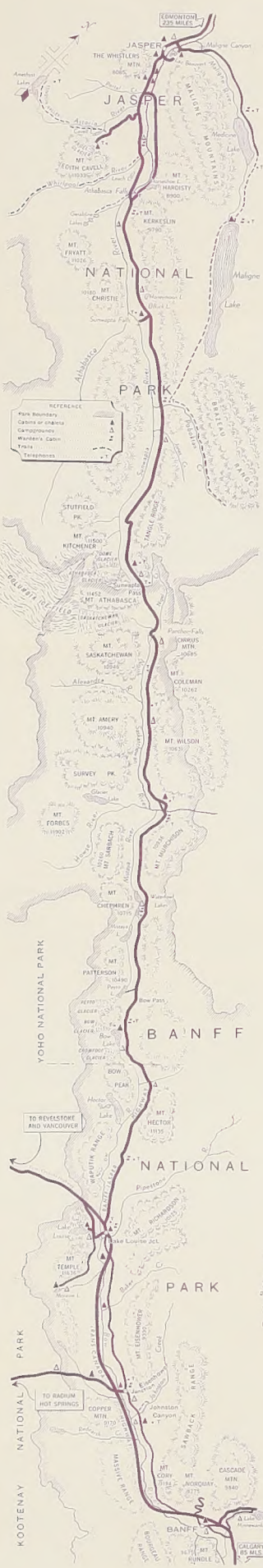
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DEPOSITORY LIBRARY MATERIAL





Gripping the sheer slopes of the surrounding mountains, the Dome Glacier is easily accessible from the Columbia Ice-field Chalet lying below.



Distances are approximate and are not related to speedometer mileages of individual cars

Miles from Junction Trans-Canada Highway and Banff-Jasper Highway (read up)

# POINTS OF INTEREST

(read down)

			Miles from Jasper Townsite
141.8	*JASPER TOWNSITE (3,472'). Headquarters of Jasper National Park. Information Bureau. Outdoor heated swimming pool, tennis courts, hotels, bungalows, campgrounds. Miette Hot Springs, 38 mi.	0.0	
141.2	JUNCTION with road to Athabasca River. Old Fort Point and Lac Beauvert Loop, 2 mi.	0.6	
140.8	Bungalows.	1.0	
140.7	Miette River. Confluence with Athabasca River.	1.1	
140.3	Bungalows.	1.5	
139	Whistlers Campground; road to Whistlers Mt. and Sky Tram.	2.0	
138.5	Campground.	3.3	
137.8	Whistlers Creek. Bungalows.	4.0	
135.5	Portal Creek.	6.3	
133.5	Junction road along southwest side of river to Mt. Edith Cavell, 11 mi; Tea Room and Chalet, 9 mi; Angel Glacier 9 mi; 8 mi. to entrance of trail to Tonquin Valley; Wabasso Campground 3.7 mi;	8.3	
	Athabasca Falls, 12.7 miles		
132	Athabasca River Bridge.	9.8	
130.0	Trail to Valley of Five.	10.9	
128.3	Viewpoint, Mt. Hardisty and Kerkeslin.	13.5	
127.8	Viewpoint, Mt. Kerkeslin and Edith Cavell.	14.0	
125.2	Horseshoe Lake.	16.6	
124.4	Viewpoint, Whirlpool Mt. to southwest, Mts. Fryatt, Christie to southeast	17.4	
122.3	*Athabasca Falls. Picnic ground.	19.5	
121.9	Canadian Youth Hostel.	19.9	
121.7	Warden's cabin.	20.1	
119.4	Mount Kerkeslin. Campground.	22.4	
118.4	Athabasca River Viewpoint. Mounts Christie, Brussels and Fryatt. Rocky Mountain goat.	23.4	
109.6	Road to Honeycomb Lake, 300 yds. Rainbow trout. Campground.	32.2	
109.2	Road to Buck Lake, 200 yds. Angling, Brook trout.	32.6	
107.8	Sunwapta Falls Junction. Bungalows and Tea Room, gas. *Sunwapta Falls, 1/4 mi.	34.0	
104.1	Bubbling Springs, Picnic Area.	37.7	
97.1	Pohoktan Creek (Stoney Indian for "owl"). Warden's Cabin.	44.7	
94.0	Jonas Creek. Campground.	47.8	
87.8	Canadian Youth Hostel.	54.0	
86.8	Beauty Creek and Falls.	55.0	
84.3	*Stutfield Glacier Viewpoint.	57.5	
82.8	Tangle Creek, near foot of grade which ascends lower slopes of Wilcox Peak.		
80.8	Sunwapta Canyon.	61.0	
79.8	*SUMMIT VIEWPOINT. Sunwapta Canyon, Mount Kitchener and Snow Dome.	62.0	
76.8	*COLUMBIA ICE-FIELD. View of Athabasca Glacier, Mount Athabasca, Snow Dome. Chalet, dining room, service station. Snowmobile trips on Athabasca Glacier. Information Bureau.	65.0	
75.8	Campground.	66.0	
73.8	BANFF-JASPER PARKS BOUNDARY. Sunwapta Summit (6,875').	68.0	
71.8	Hilda Creek. Canadian Youth Hostel.	70.0	
71.5	Trail to Parker Ridge Viewpoint, 1 mile. View of Saskatchewan Glacier and Southern end of Columbia Icefield.		
71.1	*VIEWPOINT. Mount Athabasca and Sunwapta Pass northwest.	70.7	
68.2	*VIEWPOINT. North Fork of the Saskatchewan. Cirrus Mountain eastward.	73.6	
67.5	Nigel Creek and Canyon.	74.3	
66.5	Big Hill Creek.	75.3	
63.8	Campground. Cirrus Mountain.	78.0	
61.7	Park Maintenance Camp. Emergency telephone.	80.1	
57.7	*VIEWPOINT. Alexandra River Valley westward. Mount Amery.	84.1	
57.4	Graveyard Flats. Emergency telephone at Warden's Cabin. Canadian Youth Hostel. Trail to Sunset Pass.	84.4	
56.0	*VIEWPOINT. Mounts Amery and Saskatchewan northwest. Look for moose.	85.8	
54.5	Campground. Rampart Creek.	87.3	
47.4	Bungalow Camp, gas, meals, Store.	94.4	
46.9	*VIEWPOINT. Westward of Howse and Mistaya River Valleys.	94.9	
46.3	Saskatchewan River Bridge.	95.5	
46.0	Saskatchewan River District Warden Headquarters. Emergency telephone.	95.8	
44.0	Mistaya Canyon. Short trail from parking area.	97.8	
40.0	*VIEWPOINT. Mount Chephren south, Kauffman Peaks.	101.8	
37.6	Tomem Creek. Canadian Youth Hostel.	104.2	
36.1	*VIEWPOINT. Lower Waterfowl Lake and Mount Chephren.	105.7	
35.5	Campground. Beside Waterfowl Lake.	106.3	
35.1	Park Maintenance Camp. Emergency telephone.	106.7	
34.4	*VIEWPOINT. Waterfowl Lake. Look for moose.	107.4	
32.2	Mount Barquette and Barquette Glacier, looking southwest.	109.6	
31.6	Mount Noyes and Mount Murchison northward.	110.2	
29.9	Mount Patterson. Snowbird Glacier.	111.9	
26.8	*VIEWPOINT. Peyto Glacier and Wapta Ice-Field. Parking above road.	115.0	
25.1	Summit of Bow Pass (6,785'). Peyto Lookout 3/4 mile to viewpoint of Glacier, Lake and Valley north. Nature trail starts at viewpoint.	116.7	
24.1	Mistaya District Warden Headquarters. Emergency telephone.	117.7	
22.3	*VIEWPOINT. Bow Glacier and head of Crowfoot Glacier (south).	119.5	
22.1	Lodge. No gas. 1/2 mile.	119.7	
21.0	*VIEWPOINT. Bow Lake. Mount Thompson northwest.	120.8	
20.6	Campground, south end of Bow Lake.	121.2	
20.1	*VIEWPOINT. Crowfoot Glacier.	121.7	
17.6	Helen Creek. Trail to Helen and Katharine Lakes.	124.2	
14.3	Campground. Canadian Youth Hostel on south side of Mosquito Creek. Dolomite Peak north.	127.5	
10.1	*VIEWPOINT. Hector Lake. Mount Balfour.	131.7	
6.0	Emergency telephone, at cabin above lake.	135.8	
1.7	Hend Lake. For picnic tables turn off south end.	140.1	
0		141.8	

FROM JUNCTION to BANFF TOWNSITE—36.5 miles.

BANFF TOWNSITE (4,538'). Headquarters of Banff National Park. Information Bureau. Hotels, bungalows and public campgrounds. Mineral hot springs.

\*Photographic Point

